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n army is said to march on its stomach, and it literally marches on its boots. The Afghanistan National Security Forces (ANSF) are no exception. The ANSF, with financial assistance from NATO Training Mission-Afghanistan (NTM-A)/Combined Security Transition Command-Afghanistan (CSTC-A), has had responsibility for procuring its own food since 2005. However, the NTM-A/CSTC-A Security Assistance Office-Afghanistan's (SAO-A's) Local Acquisitions Office has retained the procurement responsibility for many other war-fighting and support commodities, including ANSF combat boots. In 2010, the Local Acquisitions Office embarked on a literally ground-breaking task: Improve the quality of the ANSF's boots while establishing a boot industrial base in Afghanistan to manufacture all of those boots to U.S.-grade specifications.

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**Report Documentation Page** 

Form Approved OMB No. 0704-0188 The effort to improve ANSF boot quality began in early 2010 in response to reports from fielded units of poor quality boots. Prior to that, NTM-A/CSTC-A procured boots for the ANSF from various sources and methods: One Afghan manufacturer via an indefinite delivery, indefinite quantity (IDIQ) contract, several Afghan importers via blanket purchase agreements (BPAs), and U.S. suppliers via the foreign military sales (FMS) process. Unfortunately, there were no specifications or quality controls in place for these procurements. The simple requirement was for "boot-brown" or "boot-black" at the lowest price and delivered as quickly as possible.

The NTM-A/CSTC-A Local Acquisitions Team decided to not only take steps to improve the quality of the boots but also have all of the boots made in Afghanistan, which, at the time, appeared to be an unlikely proposition. Conventional wisdom was to simply order the boots from U.S. vendors but the team, with backing from NTM-A/CSTC-A leadership, decided on a bold, two-pronged parallel approach to get boots made to the new specifications by an Afghan vendor and into the field as quickly as possible while expanding the boot industrial base to more Afghan vendors. The acquisition objectives of this approach were to produce a U.S.-quality boot at reasonable prices, foster competition among local vendors, meet needed production quantities in a timely manner, mitigate risk of sole source vendor failure, and enable the team to provide direct oversight of the program in-country.

The counterinsurgency (COIN) benefit of this acquisition approach was to improve the Afghan economy through employing Afghans in legal, sustainable, viable, and meaningful jobs, giving them an alternative to the Taliban and other illicit sources of income. Supporting a counterinsurgency campaign through an acquisition program may not be intuitively obvious, but in the case of Afghanistan (and Iraq) this approach is codified in Section 886 of the FY 2008 National Defense Authorization Act (Public Law 110-181) and implemented through the Defense Federal Acquisition Regulation Supplement (DFARS 225.77). It was also documented in the "Afghan First Policy" espoused by the top Coalition military leader, Gen. Stanley A. McChrystal, and the NATO ambassador to Afghanistan, Mark Sedwell, in a joint memo dated March 7, 2010. NATO also codified its Afghan First Policy the following month. The current commander of ISAF, Gen. David H. Petraeus, and the U.S. ambassador to Afghanistan, the Hon. Karl W. Eikenberry, also published contracting guidance related to Afghan First in 2010.

Instead of ordering boots from U.S. vendors via the FMS process, some of which took over 2 years to arrive and cost over \$100 per pair, or ordering greater quantities of poor quality, foreign-made boots through Afghan importers, the team ceased all orders in January 2010 for an "acquisition standdown" to assess the problem before implementing the procurement solution.

The team partnered with the Afghanistan National Army (ANA) in February to conduct a 30-day field test of 100 pairs

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of the locally procured tan boots in order to establish a documented baseline of the problems against which to develop and measure improvements. The team also sent boot samples to Defense Supply Center Philadelphia (DSCP, now Defense Logistics Agency Troop Support) for laboratory testing. After inspecting 91 pairs of the field-tested boots and obtaining laboratory test results from DSCP, the team obtained and modified boot specifications with reach-back assistance from U.S. government personnel at Natick Soldier Research Development and Engineering Center (NSRDEC) to incorporate necessary quality improvement changes.

## Low Rate Initial Production (LRIP) Manufacturing and Testing

Taking advantage of the existing IDIQ contract with the existing Afghan boot manufacturer, Melli Trading Limited (Ltd.), the SAO-A boot program manager (PM), USAF Capt. Adam J.J. Pudenz, worked with Kabul Regional Contracting Center (KRCC) to modify the contract to incorporate the new boot specifications. The PM and KRCC also placed a low rate initial production (LRIP) order to Melli Trading Ltd. in March that allowed it to develop its manufacturing process for the new specifications with Defense Contract Management Agency (DCMA) field representative oversight and produce a sufficient quantity of boots for field and laboratory testing. Melli Trading Ltd. produced over 2,500 pairs of "Kabul Melli" tan boots in spring 2010 under a LRIP quality improvement program monitored by DCMA, KRCC, SAO-A, and ANA representatives. ANA and the new Afghanistan National Civil Order Police (ANCOP) personnel field-tested

these boots during their basic training at three separate sites in Afghanistan and DSCP tested samples in their laboratory in Pennsylvania.

Field and laboratory test results and inspections of more than 295 pairs of these boots in June 2010 showed marked improvements over the previously tested boots. All major failure areas, some attributed to poor design/manufacture and some to soldier actions, from February field testing had extreme decreases, with five of seven areas reduced to 5-percent defects or less. Ankle nylon and side-vent nylon experienced no

failures, whereas 46 percent and 7 percent, respectively, of the old boots experienced these failures. The newly designed boots had a 1-percent failure rate for ankle seams, compared with a 45-percent failure rate in the old boots. Loose eyelets and side vent seam failures were reduced from 30 percent to 5 percent and 19 percent to 5 percent, respectively. The two largest failures in the old boots, sole wear and sole de-bonding,

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drill pads and less vs. more marching, drill, and ceremony, respectively. It was also noted that the trainees were only issued one pair of boots and no other shoes, during their training, so wear-out was probably accelerated due to more frequent wear and use for physical training activities. However, the boots performed well in both climates and training environments. Again, all previous major failure areas had huge decreases, most reduced to 5 percent or less, and the percentage with no



Workers in the Melli boot factory construct tan "Kabul Melli" boots to the new specifications.

Photos by Staff Sgt. Marcus M. Maier, USAF

were reduced from 78 percent to 41 percent and 77 percent to 21 percent, respectively. Changes in problems attributed to ANA soldier actions were mixed with the new boots. Cutting of boots was reduced from 12 percent to 0 percent, while coloring of boots increased from 5 percent to 16 percent. While the reduction in boot cutting could be attributed to better ventilation incorporated into the new boot design, it was unclear why there was a three-fold increase in boot coloring. Overall, 30 percent of the new boots had no problems compared to only 3 percent before, a ten-fold improvement.

For the Afghanistan National Police (ANP), an LRIP order of 2,000 black boots to be manufactured to the new specification was placed with Melli Trading Ltd. on May 15, 2010. The team conducted a similar monitored LRIP quality improvement and testing program at ANP training sites in Kabul and Kandahar in July and inspected 280 pairs of those boots in early August. The Kabul and Kandahar training sites offered different training conditions, such as asphalt vs. no-asphalt

problems increased significantly. It was noted that the left sole of the boots from the Kandahar site wore much more than the matching right boot, which was attributed to the "half-goose-step" marching style taught to the ANP trainees. Remaining problem areas were minor manufacturing defects, including missed stitches, untrimmed threads, and loose eyelets/vents, and were addressed with the vendor before further orders were placed.

## Full Rate Production

The test results of both tan and black boots indicated a vast improvement in boot design and manufacturing quality over the previous Afghan-manufactured boots and those imported by Afghan suppliers from non-U.S. sources. The Local Acquisitions team worked with the local contractor, Melli Trading Ltd., to make further improvements in the largest remaining problem areas and the vendor quickly incorporated these changes into their production process. Their responsiveness and demonstrated quality products led the SAO-A Local Acquisitions

Office to place full-rate production orders in July 2010 for 60,645 pairs of tan winter and 39,355 tan summer boots. Successful completion of the ANP field and laboratory tests in August resulted in placement of orders with Melli Trading Ltd. in August for 30,000 pairs of black summer and 30,000 pairs of black winter boots. Deliveries of the tan summer boots to the ANA central supply depot in Kabul began in early October and were completed in mid-December. Deliveries of the black boots to the ANP Interim Logistics Facility in Kabul began in late November and were completed by the end of December 2010. More orders were placed in 2011 with Melli Trading Ltd. and two other vendors (see below) to support ANP growth from 109,000 to 134,000 personnel and ANA growth from 134,000 to 171,000 personnel by October 2011.



Capt. Saifurahman Ayar (Afghanistan National Army), Maj. Darren Rhyne (USAF), Rick Moran (DCMA), and Capt. Adam Pudenz (USAF) inspect tan boot material at the Melli factory in spring 2010.

Photo by 1st Lt. Jonathan Kim, USAF

## Concurrent Solicitation

In parallel with the Melli Trading Ltd. boot development and production improvement effort, the SAO-A Local Acquisitions boot PM worked with KRCC, DSCP, NSRDEC, and DCMA to incorporate the new specifications into an Afghan First, multipleaward, 5-year IDIQ boot acquisition strategy for the ANSF that was approved by the Senior Contracting Official-Afghanistan (SCO-A) in April 2010. KRCC released the solicitation to Afghan industry at the end of April. Over 20 proposals were received by the end of June, and source selection with a fourperson KRCC & SAO-A team with NSRDEC reach-back consultation support began in early July 2010. The Competitive Range Determination was finalized for this source selection in October 2010 in readiness to award multi-year IDIQ contracts to two additional local manufacturers with a maximum value of \$200 million over 5 years. These additional contracts were awarded in March 2011.

## Way Ahead and Accolades

In addition to the award of these contracts, the SAO-A Local Acquisitions-led boot acquisition team can claim several important successes with its efforts to date. Melli Trading Ltd. is employing over 500 people manufacturing quality boots to U.S. specifications at two-thirds the cost of boots procured from U.S. vendors through the FMS process, not including transportation and FMS management costs. The success of this program has confirmed that Afghan businesses can manufacture quality products at competitive prices in a timely manner, with the added benefit of employing Afghan citizens in legal, living-wage-earning jobs. The Local Acquisitions Office is building upon the success of this program by converting other previously-imported products, such as several nylon-based

tactical gear and 23 other basic organizational clothing and individual equipment items, into Afghan-made products with U.S. specifications.

The success of this boot development effort was touted by the Commander of the International Security Assistance Force (COMISAF), Gen. David H. Petraeus, in his "COMISAF's Counterinsurgency (COIN) Contracting Guidance" memo dated Sept. 8, 2010. This memo advised commanders, contracting personnel, military personnel, and civilians of NATO, ISAF, and U.S. Forces-Afghanistan to "Emulate successes such as NTM-A/CSTC-A's Afghan First program that created a boot making industry in Kabul." Even prior to the COIN contracting memo, the success of the program reached the office of Afghan President Hamid Karzai, to whom Gen. Petraeus personally presented several pairs of the LRIP "Kabul Melli" boots in July 2010.

In addition to the design and manufacturing improvement effort, the SAO-A boot PM is also

working with the ANA and ANP leadership to advise their personnel on the proper wear and care of their boots which, in a society used to wearing mainly sandals, presents some cultural challenges. The NTM-A/CSTC-A Directorate of Logistics also prepared a fragmentation order (FRAGO) to U.S. and Afghan troops in the field on how to distinguish the new "Kabul Melli" boots from the old ones and how to go about exchanging old, defective boots for new ones. This wear and care guidance, training, and exchange guidance to ANSF personnel, along with a better quality designed and manufactured product made by multiple Afghan vendors, promises to provide the ANSF with a highly serviceable combat boot on par with that of Western forces for years to come. These Afghan-made boots may also one day compete on the regional and international markets with those made in other Asian countries, which would be the ultimate Afghan First success story.

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